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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-23850; Directorate Identifier 2005-NM-126-AD; Amendment 39-14715; AD 2006-16-15]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model MD-10-10F and MD-10-30F Airplanes and Model MD-11 and MD-11F Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to certain McDonnell Douglas Model MD-11 series airplanes. That AD currently requires a revision of the airplane flight manual (AFM) to alert the flightcrew that both flight management computers (FMCs) must be installed and operational. That AD also requires an inspection to determine the serial number of the FMCs; and follow-on corrective actions, if necessary, which terminate the AFM revision. That AD also requires an inspection to verify if a certain modification is on the identification plates of the FMCs; and applicable follow-on and corrective actions. This new AD requires installation of upgraded FMC software, which would terminate the existing AD. This new AD also adds airplanes to the applicability, including adding Model MD-10-10F and MD-10-30F airplanes. This AD results from a report that the FMC does not acknowledge the pre-set glareshield control panel (GCP) altitude when profile (PROF) mode is engaged in descent mode. We are issuing this AD to prevent the un-commanded descent of an airplane below the selected level-off altitude, which could result in an unacceptable reduction in the separation between the airplane and nearby air traffic or terrain.

DATES: This AD becomes effective September 22, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of September 22, 2006.

On November 26, 2001 (66 FR 53335, October 22, 2001), the Director of the Federal Register approved the incorporation by reference of McDonnell Douglas Service Bulletin MD11-34-085, Revision 01, dated September 20, 1999.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024), for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Natalie Phan-Tran, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5343; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 2001-21-05, amendment 39-12476 (66 FR 53335, October 22, 2001). The existing AD applies to certain McDonnell Douglas Model MD-11 series airplanes. That NPRM was published in the Federal Register on February 15, 2006 (71 FR 7880). That NPRM proposed to retain all requirements of AD 2001-21-05 and require installation of upgraded flight management computer (FMC) software, which would terminate the existing AD. That NPRM also proposed to add airplanes to the applicability, including adding Model MD-10-10F and MD-10-30F airplanes.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been received on the NPRM.

Support for NPRM

The Air Line Pilots Association supports the NPRM.

Request To Supersede AD 2001-21-05 and AD 2004-18-04

UPS requests that the NPRM be rewritten to supersede both AD 2001-21-05 and AD 2004-18-04, amendment 39-13782 (69 FR 53794, September 21, 2004), and allow compliance by installing FMCs part number (P/N) 4059050-921 in accordance with Boeing Service Bulletin MD11-34-129, dated September 22, 2004.

We acknowledge the commenter's request; however we do not agree that this AD should supersede both ADs. This AD is a supersedure of AD 2001-21-05 and does allow compliance by installing FMC P/N 4059050-921. As specified in paragraphs (j)(2), (j)(3), and (j)(4) of this AD, operators that install FMC P/N 4059050-921 must do so in accordance with Boeing Service Bulletin MD11-34-129, dated September 22, 2004, and as specified in paragraph (j) of this AD, doing the installation is terminating action for the requirements of paragraphs (f) through (i) of this AD (paragraphs (f) through (i) are a restatement of the requirements of AD 2001-21-05).

This AD does not supersede AD 2004-18-04 because that AD contains requirements for airplanes that are not in the applicability of this AD. AD 2004-18-04 is applicable to all McDonnell Douglas Model MD-10-10F, MD-10-30F, MD-11, MD-11F, and 717-200 airplanes. This AD is applicable only to certain Model MD-10-10F and MD-10-30F airplanes and all Model MD-11 and MD-11F airplanes. However, as specified in paragraph (n)(4) of this AD, doing the applicable software/hardware upgrades required by paragraph (j) or (k) of this AD is approved as an alternative method of compliance for the actions required by AD 2004-18-04. We have not revised this AD in this regard.

Request To Clarify That Airplanes Having FMC P/N 4059050-921 Installed Are Not Applicable to the NPRM

The same commenter requests that the NPRM be clarified to indicate that it is not effective for any airplanes that already have P/N 4059050-921 installed.

We disagree with the commenter that this AD is not applicable to airplanes that already have P/N 4059050-921 installed. This AD is applicable to all Model MD-11 and MD-11F airplanes and certain Model MD-10-10F and MD-10-30F airplanes and requires installation of upgraded FMC software. For Model MD-11 and MD-11F airplanes, installing P/N 4059050-921 is an acceptable method of compliance with paragraph (j) of this AD. As specified in paragraph (e) of this AD, if the actions have already been done, then operators are in compliance with the applicable requirements of this AD. We have not revised this AD in this regard.

Request To Clarify That Any FMC P/N 4059050-921 Is Acceptable Regardless of Origin

The same commenter requests that the NPRM be clarified to specify that any FMC P/N 4059050-921 is acceptable for compliance with the NPRM regardless of the origin of the part (original manufacture, factory conversion, or on-aircraft conversion).

We agree with the commenter that any FMC P/N 4059050-921 is acceptable for compliance. Paragraphs (j)(2), (j)(3), and (j)(4) of this AD specify installing FMC P/N 4059050-921 in accordance with the service information specified in those paragraphs. Any FMC P/N 4059050-921 regardless of its origin is acceptable provided it is installed in accordance with the service information. No change is necessary. If operators install P/N 4059050-921 in accordance with a method that is not specified in the service information identified in this AD, operators must request approval of an alternate method of compliance as specified in paragraph (n) of this AD.

Clarification of Service Bulletin Date

In the NPRM, we inadvertently referred to the date of Boeing Service Bulletin MD11-34-068, Revision 3, as April 6, 2004. The correct date is April 6, 2005. We have revised this AD accordingly.

Conclusion

We have carefully reviewed the available data, including the comments that have been submitted, and determined that air safety and the public interest require adopting the AD with the change described previously. We have determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 230 airplanes of the affected design in the worldwide fleet and about 117 U.S.-registered airplanes. The following table provides the estimated costs for U.S. operators to comply with this AD. The average labor rate per hour is \$65.

Estimated Costs

Action	Work hours	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Airplane Flight Manual Revision, Inspections and Software Installation (required by AD 2001-21-05)	2	\$0	\$130	59	\$7,670
Upgrade Software/Hardware (new action)	2	\$0	\$130	117	\$15,210

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-12476 (66 FR 53335, October 22, 2001) and by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

U.S. Department
of Transportation
**Federal Aviation
Administration**



2006-16-15 McDonnell Douglas: Amendment 39-14715. Docket No. FAA-2006-23850; Directorate Identifier 2005-NM-126-AD.

Effective Date

- (a) This AD becomes effective September 22, 2006.

Affected ADs

- (b) This AD supersedes AD 2001-21-05.

Applicability

(c) This AD applies to McDonnell Douglas airplanes, as specified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Model MD-10-10F and MD-10-30F airplanes, as identified in Boeing Service Bulletin MD10-31-053, Revision 1, dated June 14, 2005.

(2) All Model MD-11 and MD-11F airplanes.

Unsafe Condition

(d) This AD results from a report that the flight management computer (FMC) does not acknowledge the pre-set glareshield control panel (GCP) altitude when profile (PROF) mode is engaged in descent mode. We are issuing this AD to prevent the un-commanded descent of an airplane below the selected level-off altitude, which could result in an unacceptable reduction in the separation between the airplane and nearby air traffic or terrain.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Restatement of Requirements of AD 2001-21-05

Airplane Flight Manual (AFM) Revision

(f) For MD-11 and MD-11F airplanes having manufacturer's fuselage numbers 0447 through 0552 inclusive, and 0554 through 0621 inclusive: Within 5 days after May 20, 1998 (the effective date of AD 98-10-01, amendment 39-10512), revise Section 1, page 5-1, of the Limitations Section of the FAA-approved AFM to include the following statement. This may be accomplished by inserting a copy of this AD into the AFM.

"Prior to dispatch of the airplane, both Flight Management Computer 1 (FMC-1) and FMC-2 must be installed and operational."

Inspection

(g) For MD-11 and MD-11F airplanes having manufacturer's fuselage numbers 0447 through 0552 inclusive, and 0554 through 0621 inclusive: Within 90 days after November 26, 2001 (the effective date of AD 2001-21-05), do an inspection to verify that modification "AS" is on the front and rear identification plates of FMC-1 and FMC-2, per McDonnell Douglas Service Bulletin MD11-34-085, Revision 01, dated September 20, 1999. After the inspection has been done, the AFM revision required by paragraph (f) of this AD may be removed from the AFM.

Condition 1 (Modification "AS" Is Installed)

(h) If modification "AS" is found installed during the inspection required by paragraph (g) of this AD, before further flight, do the actions specified in paragraphs (h)(1) and (h)(2) of this AD, per McDonnell Douglas Service Bulletin MD11-34-085, Revision 01, dated September 20, 1999.

(1) Do a test of the FMCs in the flight compartment to ensure that modification "AS" is operational, and do applicable corrective actions, if necessary. Both FMCs must have modification "AS" installed and pass the test before loading new software per paragraph (h)(2) of this AD.

(2) Install new software and reidentify FMC-1 and FMC-2 as part number (P/N) 4059050-912.

Note 1: McDonnell Douglas Service Bulletin MD11-34-085, Revision 01, dated September 20, 1999, references Honeywell Service Bulletin 4059050-34-6020, Revision 1, dated April 30, 1999, as an additional source of service information for the installation and reidentification requirements of paragraphs (h)(2) and (i)(2) of this AD.

Condition 2 (Modification "AS" Is Not Installed)

(i) If modification "AS" is NOT found installed during the inspection required by paragraph (g) of this AD, before further flight, do the actions specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD, per McDonnell Douglas Service Bulletin MD11-34-085, Revision 01, dated September 20, 1999.

(1) Remove FMC-1 and FMC-2.

(2) Install modification "AS" and new software, and reidentify FMC-1 and FMC-2 as P/N 4059050-912.

(3) Install modified and reidentified FMC-1 and FMC-2.

New Requirements of This AD

Upgrade Software/Hardware—Model MD-11 and MD-11F Airplanes

(j) For Model MD-11 and MD-11F airplanes: Within 18 months after the effective date of this AD, upgrade the FMC software, and hardware as applicable, by doing the applicable actions specified in paragraph (j)(1), (j)(2), (j)(3), or (j)(4) of this AD. Doing this upgrade terminates the requirements of paragraphs (f) through (i) of this AD.

(1) For airplanes on which FMC P/N 4059050-906 through -912 is installed: Install new software in the main avionics rack, and reidentify FMC-1 and FMC-2 as P/N 4059050-913, in accordance with the Accomplishment Instructions of Boeing Service Bulletin MD11-34-130, dated March 16, 2005.

Note 2: Boeing Service Bulletin MD11-34-130 refers to Honeywell Alert Service Bulletin 4059050-34-A6024, dated March 9, 2005, as an additional source of service information for doing the actions specified in paragraph (j)(1) of this AD.

(2) For airplanes on which FMC P/N 4059050-920 is installed: Install new software in the main avionics rack, and reidentify FMC-1 and FMC-2 as P/N 4059050-921, in accordance with the Accomplishment Instructions of Boeing Service Bulletin MD11-34-129, dated September 22, 2004.

Note 3: Boeing Service Bulletin MD11-34-129 refers to Honeywell Alert Service Bulletin 4059050-34-A6023, dated September 22, 2004, as an additional source of service information for doing the actions specified in paragraph (j)(2) of this AD.

(3) For airplanes on which FMC P/N 4059050-906 through -911 is installed: In lieu of doing the software upgrade specified in paragraph (j)(1) of this AD, install new hardware and software and reidentify FMC-1 and FMC-2 as P/N 4059050-921, by doing all the applicable actions specified in the Accomplishment Instructions of McDonnell Douglas Service Bulletin MD11-34-085, Revision 01, dated September 20, 1999; Boeing Service Bulletin MD11-34-068, Revision 3, dated April 6, 2005; and Boeing Service Bulletin MD11-34-129, dated September 22, 2004.

Note 4: McDonnell Douglas Service Bulletin MD11-34-085 references Honeywell Service Bulletin 4059050-34-6020, Revision 1, dated April 30, 1999; Boeing Service Bulletin MD11-34-068 references Honeywell Service Bulletin 4059050-34-0010, dated March 19, 2003; and Boeing Service Bulletin MD11-34-129 refers to Honeywell Alert Service Bulletin 4059050-34-A6023, dated September 22, 2004; as additional sources of service information for doing the actions specified in paragraph (j)(3) of this AD.

(4) For airplanes on which FMC P/N 4059050-912 is installed: In lieu of doing the software upgrade specified in paragraph (j)(1) of this AD, install new hardware and software and reidentify FMC-1 and FMC-2 as P/N 4059050-921, by doing all the applicable actions specified in the Accomplishment Instructions of Boeing Service Bulletin MD11-34-068, Revision 3, dated April 6, 2005; and Boeing Service Bulletin MD11-34-129, dated September 22, 2004.

Note 5: Boeing Service Bulletin MD11-34-068 references Honeywell Service Bulletin 4059050-34-0010, dated March 19, 2003; and Boeing Service Bulletin MD11-34-129 refers to Honeywell Alert Service Bulletin 4059050-34-A6023, dated September 22, 2004; as additional sources of service information for doing the actions specified in paragraph (j)(4) of this AD.

Upgrade Software—Model MD-10-10F and MD-10-30F Airplanes

(k) For Model MD-10-10F and MD-10-30F airplanes: Within 18 months after the effective date of this AD, install new software in the main avionics rack and reidentify the versatile integrated avionics (VIA) digital computer as P/N 4081580-903, in accordance with the Accomplishment Instructions of Boeing Service Bulletin MD10-31-053, Revision 1, dated June 14, 2005.

Note 6: Boeing Service Bulletin MD10-31-053 refers to Honeywell Alert Service Bulletin 4081580-31-A6002, dated January 14, 2005, as an additional source of service information for doing the actions specified in paragraph (k) of this AD.

Parts Installation

(l) For Model MD-11 and MD-11F airplanes: As of the effective date of this AD, no person may install an FMC, P/N 4059050-906 through -912, or -920, on any airplane; except as required by the actions specified in paragraphs (h), (i), and (j) of this AD.

(m) For MD-10-10F and MD-10-30F airplanes: As of the effective date of this AD, no person may install a VIA digital computer, P/N 4081580-901 or 4081580-902, on any airplane.

Alternative Methods of Compliance (AMOCs)

(n)(1) The Manager, Los Angeles Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

(3) AMOCs approved previously in accordance with AD 2001-21-05 are approved as AMOCs for the corresponding provisions of paragraphs (f) through (i) of this AD.

(4) Doing the actions required by paragraph (j) or (k) of this AD, as applicable, is approved as an AMOC for the actions required by AD 2004-18-04, amendment 39-13782.

Material Incorporated by Reference

(o) You must use the applicable service bulletins listed in Table 1 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise.

Table 1.—All Material Incorporated by Reference

Service Bulletin	Revision Level	Date
Boeing Service Bulletin MD10-31-053	1	June 14, 2005
Boeing Service Bulletin MD11-34-068	3	April 6, 2005
Boeing Service Bulletin MD11-34-129	Original	September 22, 2004
Boeing Service Bulletin MD11-34-130	Original	March 16, 2005
McDonnell Douglas Service Bulletin MD11-34-085	01	September 20, 1999

(1) The Director of the Federal Register approved the incorporation by reference of the documents listed in Table 2 of this AD in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

Table 2.—New Material Incorporated by Reference

Service Bulletin	Revision Level	Date
Boeing Service Bulletin MD10-31-053	1	June 14, 2005
Boeing Service Bulletin MD11-34-068	3	April 6, 2005
Boeing Service Bulletin MD11-34-129	Original	September 22, 2004
Boeing Service Bulletin MD11-34-130	Original	March 16, 2005

(2) On November 26, 2001 (66 FR 53335, October 22, 2001), the Director of the Federal Register approved the incorporation by reference of McDonnell Douglas Service Bulletin MD11-34-085, Revision 01, dated September 20, 1999.

(3) Contact Boeing Commercial Airplanes, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024), for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and

Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on August 3, 2006.
Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. E6-13448 Filed 8-17-06; 8:45 am]